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## (54) EPOXY RESIN COMPOSITION FOR FLAME-RETARDANT LIGHT-WEIGHT COMPOSITE MATERIAL, INTERMEDIATE AND COMPOSITE MATERIAL

## (57)Abstract

PURPOSE: To obtain a high-strength and lightweight composition for lightweight composite materials suitable for inner core materials, etc., being readily laminated, co-crosslinkable with other prepreg by blending an epoxy resin with specific amounts of fine hollow spheres, a blowing agent, a flame-retardant, etc.

CONSTITUTION: (A) 50-95 pts.wt. epoxy resin is blended with (B) 5-35 pts.wt. fine hollow spheres (e.g. glass or alumina silicate), (C) 0.1-15 pts.wt. blowing agent (e.g. azobisisobutyronitrile), (D) 5-30 pts.wt. flame-retardant (e.g. tetrabromobisphenol), (E) 0.5-10 pts.wt. curing agent (e.g. dicyan) and (F) 0.5-10 pts.wt. curing promoter. The composition is molded into a sheetlike or filmy state to give a single material intermediate for composite material, which is used to give composite materials or foamed and cured to give lightweight composite materials. Or a reinforced intermediate is obtained from the intermediate and a reinforcing material and processed to give lightweight composite materials or foamed and cured to give lightweight composite materials.

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